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# **Substance Abuse Detoxification: Improvements Needed In Linkage to Treatment**

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## Substance Abuse Detoxification Is Not Substance Abuse Treatment

In 2000, 12.6 million Americans were heavy drinkers (consuming five or more drinks in one sitting), and 14 million Americans were using illicit drugs (Office of Applied Studies 2001). Overall, fewer than one-fourth of those needing treatment receive it (Schneider Institute for Health Policy 2001). Each year, at least 300,000 patients with substance use disorders or acute intoxication obtain inpatient detoxification in general hospitals; additional numbers obtain detoxification in other settings.

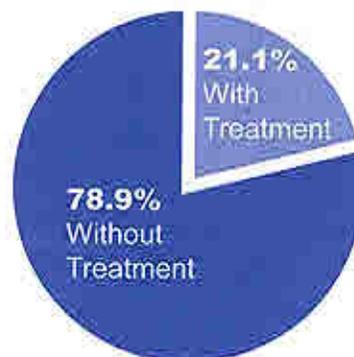
Detoxification involves the medical management or monitoring of acute alcohol or drug intoxication and withdrawal. Although detoxification may offer patients a gateway into a substance abuse treatment program, detoxification alone will not lead to lasting improvements (CSAT 1995; Gerstein and Harwood 1990; Institute of Medicine 1990). Receiving continuing care following detoxification is considered essential for successful recovery. Research has shown that patients who receive continuing care have better outcomes in terms of drug abstinence (McCusker et al. 1995) and readmission rates (Daley et al. 1998) than those who do not receive continuing care.

## Only a Portion of People Receiving Inpatient Detoxification Receive Inpatient Treatment for Substance Abuse

Analyses of three databases show that most people who undergo detoxification do not receive subsequent substance abuse treatment. Because these analyses were conducted using claims data, people enrolled in Alcoholics Anonymous (AA), Narcotics Anonymous (NA), or similar groups could not be detected and therefore are not included in the findings. See the "Methods" section at the end of the report for a description of the databases.

An analysis of the procedure codes in one national hospital discharge database indicates that only about one-fifth of people discharged from acute care hospitals for detoxification also received substance abuse treatment during that hospitalization. (See Figure 1.) This was true across genders, age groups, and payor types. People who received treatment were more likely to be female, to be under age 18, to live in the South, to have private insurance or Medicare, and/or to not be admitted through the emergency room.

**Figure 1. One-Fifth of Inpatient Detoxification Discharges Received SA Treatment During Hospitalization in 1997**

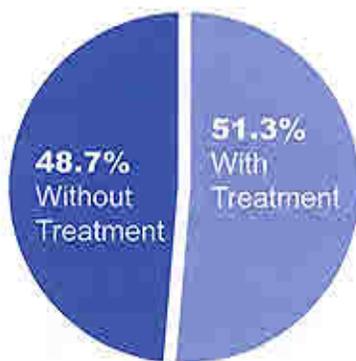


Admission through an emergency room is a particularly strong predictor of failure to receive treatment. Only 15 percent of people who were admitted through an emergency room and then discharged received treatment. Furthermore, the average length of stay for people undergoing detoxification *and* treatment in 1997 was only 7.7 days. Therefore, even people identified as receiving treatment in an inpatient setting may receive services that only stabilize their condition rather than address their underlying addiction.

Some decline in the numbers of patients receiving inpatient treatment in recent years is to be expected, given the overall health care industry shift to decreased use of inpatient services in favor of outpatient treatment.

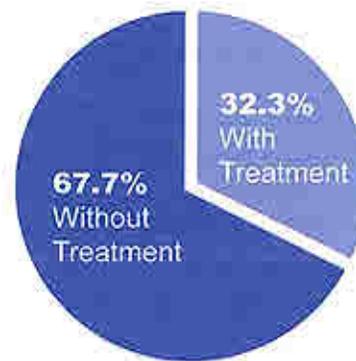
However, an analysis of a second database, which records numbers of people with private insurance, indicates that half of all detoxification procedures in any setting (inpatient or outpatient) subsequently were followed by either inpatient or outpatient treatment for a substance abuse or mental disorder within 30 days of detoxification. (See Figure 2.)

**Figure 2. Half of Detoxifications of Privately Insured Persons in Any Setting Resulted in SA Treatment Within 30 Days of Detoxification in 1999**



Low rates of treatment following detoxification were also evident from analyses of a third database, which represents people with Medicaid coverage and people treated by public mental health or substance abuse agencies from three States (Delaware, Oklahoma, and Washington). Preliminary data indicate that only one-third of the population detoxified in inpatient, residential, or outpatient settings subsequently received inpatient, residential, or outpatient treatment for a substance abuse or mental health disorder within 30 days of detoxification. (See Figure 3.) The rate of follow-up treatment was somewhat higher for people who received services under the auspices of both Medicaid and the State mental health/substance abuse (MH/SA) agencies (41.7 percent) than for those who received services under the sole auspices of the State MH/SA agencies (29 percent).

**Figure 3. One-Third of Medicaid and Public MH/SA Agency Detoxifications in Any Setting Received Treatment Within 30 Days of Detoxification in 1996**



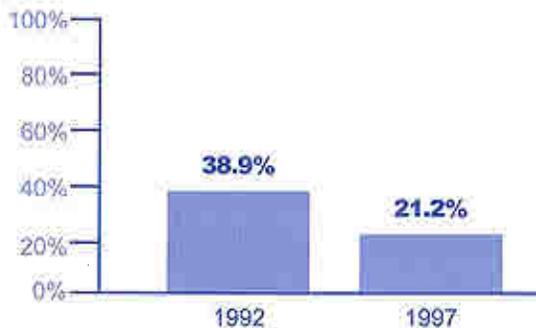
Across all payors there is significant room for improvement in linking patients to treatment following detoxification. A broad definition for “receiving treatment,” one that encompassed *any* related mental health/substance abuse service, was used in these analyses. Therefore, these results are likely to overestimate the true linkage between detoxification and appropriate substance abuse treatment. Given that patients who require detoxification are among those with serious substance use disorders, improvement in linking detoxification patients to substance abuse treatment is imperative. For more detailed information on the definitions of various kinds and levels of treatment, see the “Methods” section.

It is important to note that each patient population studied by payor may have different characteristics. The low rates of follow-up treatment may also reflect differences in the relative availability of treatment services in various geographic regions, differential access to treatment as reflected in covered benefits, or benefit restrictions. For example, in the public sector, in an effort to make funding available for services to as large a group as possible, limitations may be placed on the number of months of services patients are eligible to receive. Such variation makes comparisons across payors inappropriate.

## Substance Abuse Treatment Following Detoxification Has Been Declining

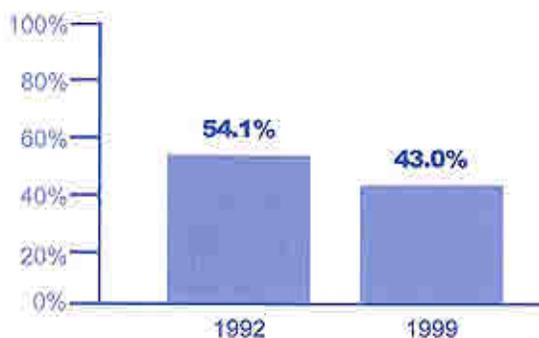
The lack of substance abuse treatment following detoxification seems to be getting worse rather than improving. Analyses of discharge records from acute care hospitals in the United States found that substantially more people received treatment along with inpatient detoxification in 1992 than in 1997. (See Figure 4.)

**Figure 4. Inpatient SA Treatment Provided with Inpatient Detoxification Has Declined over 5 Years**



The decline in inpatient substance abuse treatment may not be offset by an increase in subsequent post-discharge treatment. Analysis of claims data from privately insured individuals indicated that fewer people received treatment in any setting within 30 days of detoxification in 1999 than in 1992. (See Figure 5.)

**Figure 5. SA Treatment within 30 Days of Discharge for Detoxification of Privately Insured Patients Declined Over 7 Years**



## Greater Linkages Between Detoxification and Treatment Are Needed

A number of studies confirm that providing access to treatment services immediately following detoxification for substance abuse is critical to positive outcomes for patients (Gerstein and Harwood 1990). Patients who undergo detoxification not followed by admission to treatment miss an opportunity to develop a therapeutic partnership for change. Such lost chances for changing behavior are likely to result in continued addiction, adverse health consequences, and higher health care costs for these individuals, as well as greater social disruptions for their families, co-workers, acquaintances, and for society as a whole. The cycle of patients repeatedly passing through emergency rooms and inpatient detoxification—the so-called “revolving door”—is costly, as is the increased severity of substance abuse problems that may result from continued lack of treatment.

Coordinating a continuum of care following detoxification, however, presents a challenge to the delivery of adequate and appropriate alcohol and drug treatment services both in the public and private sectors. Few public and private insurers, managed behavioral health care organizations, health care facilities, and treatment programs address the need to ensure that individuals enter treatment following their discharge from detoxification programs. Managed care contracts (public or private) rarely address this issue.

In 1998, only 15 States addressed the continuum of care in their written Medicaid plans, Medicaid managed care contracts, quality assurance plans, or other formal agreements (Office of Inspector General [OIG] 1998). Most Medicaid agencies do not collect data on whether individuals are admitted to treatment following detoxification, and rarely do these programs apply case management techniques to substance abuse services (OIG 1998). Moreover, a number of studies estimate that approximately 10 million people who need these services go without any substance abuse treatment, which is at least partly due to constraints on the availability of treatment services (CSAT 2000).

## Some Efforts to Improve Linkages Are Underway

The alcohol and drug treatment field and accrediting bodies are beginning to address measures to ensure accountability for entry into treatment following detoxification, and for the process of subsequent care. The Washington Circle Group, a coalition of health plans, researchers, and policymakers, has developed performance indicators for health plans to promote assessment of whether individual patients enter treatment following detoxification and continue to be engaged in treatment. Application of such quality measures to both public and private health programs will focus attention on the function of detoxification in ameliorating and stabilizing the acute medical, substance use, and mental health symptoms that prevent patients from entering rehabilitation programs directly from detoxification.

Studies are beginning to examine how to link more people undergoing detoxification to treatment. A recent study showed that higher cost sharing is associated with a lower likelihood of receiving treatment in a privately insured population (Stein et al. 2000). The authors estimated that waiving all outpatient copayments would have resulted in a predicted 24 percent decrease in the number of patients not receiving subsequent treatment. Another study found that escorting patients on the day of discharge from the detoxification unit on a shuttle bus to the continuing care program and providing incentives (worth U.S. \$13) significantly increased participation in treatment: 76 percent participated, compared to 44 percent in the standard program with no escort (Chutuape et al. 2001). Additional attention and efforts are needed to ensure that people receiving detoxification subsequently receive treatment for their substance abuse disorder.

Also, interventions are available for patients who are ambivalent about entering treatment following detoxification. Motivational techniques that prepare patients to enter treatment have been shown to be associated with greater participation in treatment and positive treatment outcomes (CSAT 1999). These techniques emphasize that the responsibility and capacity for change lie with the patient. Therapists assist and encourage patients during detoxification and stabilization to recognize problem behavior, to regard positive change as in their best interest, to feel competent to change, to develop a plan for change, to select an appropriate treatment setting, to take action by entering treatment, and to continue strategies that discourage a return to problem behavior (CSAT 1999).

## Conclusion

To assist patients in moving from detoxification to treatment, more information is needed on the range of detoxification programs (inpatient and outpatient) being provided and on processes at an individual, program, and system levels. Key questions to be addressed include the following:

- Which methods are the most effective for improving linkages between detoxification and treatment?
- Which types of linkages work best for patients at varying levels of readiness for treatment?
- How are such linkages affected by financial and organizational factors?

This information will provide an evidence base for developing appropriate organization and financing policies that support improvements in treatment.

## Methods

Data for this study came from three sources: (1) the Healthcare Cost and Utilization Project-National Inpatient Sample (HCUP-NIS), (2) MarketScan® claims data, and (3) the CSAT/CMHS 1996 Integrated Data Base (IDB) for three States.

The HCUP-NIS is a census of discharges from a sample of community hospitals from 22 States developed by the Agency for Healthcare Research and Quality (AHRQ). The HCUP-NIS sample was selected to approximate a national sample of such hospitals and has been shown to produce estimates of inpatient utilization similar to the National Hospital Discharge Survey. Community hospitals are non-Federal, short-term, general hospitals, excluding specialty hospitals in psychiatry and chemical dependency. Data for years 1992 and 1997 and HCUP-NIS weights for deriving national estimates were used in this study.

The MarketScan® database compiles claims information from private health insurance plans of large employers. The covered individuals include employees, their dependents, and early retirees of companies who participate in the database. The MEDSTAT Group collects the claims and standardizes them. These claims are collected from over 200 different insurance companies, including Blue Cross and Blue Shield plans, preferred provider organizations, health maintenance organizations, and point-of-service plans. Both capitated and noncapitated plans are included.

In 1999, about 40 employers participated, and 4.1 million lives were covered.

The CSAT/CMHS Integrated Data Base (IDB) project assembled information from three types of State organizations—State mental health, State substance abuse, and Medicaid agencies. The IDB contains data from these types of organizations on mental health and substance abuse patients, their use of services, and level of expenditures. The IDB is assembled separately for three participating States—Delaware, Oklahoma, and Washington—and links person-level and service-level information across the multiple organizations in each State into one uniform database (see Coffey et al. 2001).

Individuals were defined as receiving detoxification treatment if they had an International Classification of Diseases, Ninth Edition, Clinical Modification (ICD-9-CM) code that indicated a substance abuse detoxification procedure (codes 94.62, 94.63, 94.65, 94.66, 94.68, 94.69). Individuals were defined as receiving inpatient treatment with detoxification if they had an ICD-9-CM code that indicated detoxification and rehabilitation (codes 94.63, 94.66, 94.69). Individuals were defined as receiving substance abuse treatment following inpatient detoxification if they had an inpatient stay or outpatient record with a primary substance abuse or mental health diagnosis, or if they had a mental health or substance abuse procedure as indicated by Current Procedural Terminology codes, or if they received services in a mental health or substance abuse specialty facility.

## References

- Agency for Healthcare Research and Quality. Publications related to the Healthcare Cost and Utilization Project. <http://www.ahrq.gov> [Accessed July 18, 2002].
- Center for Substance Abuse Treatment. *Detoxification from Alcohol and Other Drugs*. Treatment Improvement Protocol (TIP) Series 19. DHHS Publication No. (SMA) 95-3046. Rockville, MD: Center for Substance Abuse Treatment, 1995.
- Center for Substance Abuse Treatment. *Enhancing Motivation for Change in Substance Abuse Treatment*. Treatment Improvement Protocol (TIP) Series 35. DHHS Publication No. (SMA) 99-3354. Rockville, MD: Center for Substance Abuse Treatment, 1999, p. 4.
- Center for Substance Abuse Treatment. *Changing the Conversation, Improving Substance Abuse Treatment: The National Treatment Plan Initiative*. Rockville, MD: Center for Substance Abuse Treatment, 2000.
- Chutuape, M.A., Katz, E.C., and Stitzer, M.L. Methods for enhancing transition of substance dependent patients from inpatient to outpatient treatment. *Drug and Alcohol Dependence* 61:137-143, 2001.
- Coffey, R.M., Graver, L., Schroeder, D., Busch, J.D., Dilonardo, J., Chalk, M., and Buck, J.A. *Mental Health and Substance Abuse Treatment: Results From a Study Integrating Data From State Mental Health, Substance Abuse, and Medicaid Agencies*. SAMHSA Publication No. SMA-01-3528. Rockville, MD: Center for Substance Abuse Treatment and Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, 2001.
- Daley, M., Argeriou, M., and McCarty, D. Substance abuse treatment for pregnant women: A window of opportunity. *Addiction Behaviors* 23:239-249, 1998.
- Gerstein, D.R., and Harwood, H.J., eds. *Treating Drug Problems: Vol 1. A Study of the Evolution, Effectiveness, and Financing of Public and Private Drug Treatment Systems*. Washington, DC: National Academy Press, 1990.
- Institute of Medicine. *Broadening the Base of Treatment for Alcohol Problems*. Washington, DC: National Academy Press, 1990.
- McCusker, J., Bigelow, C., Luippold, R., Zorn, M., and Lewis, B.F. Outcomes of a 21-day drug detoxification program: Retention, transfer to further treatment, and HIV risk reduction. *American Journal of Drug and Alcohol Abuse* 21(1):1-16, 1995.
- Office of Applied Studies. *Summary of Findings from the 2000 National Household Survey on Drug Abuse*. National Household Survey on Drug Abuse Series: H-13. DHHS Publication No. (SMA) 01-3549. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2001.
- Office of Inspector General. *Follow-up to Detoxification Services for Medicaid Beneficiaries*. Washington, DC: Department of Health and Human Services, 1998. <http://oig.hhs.gov/oci/reports/a311.pdf> [Accessed July 3, 2002].
- Schneider Institute for Health Policy, Brandeis University. *Substance Abuse. The Nation's Number One Health Problem*. Princeton, NJ: Robert Wood Johnson Foundation, 2001.
- Stein, B., Orlando, M., and Sturm, R. The effect of co-payment on drug and alcohol treatment following inpatient detoxification under managed care. *Psychiatric Services* 51(2):195-198, 2000.